REMARKS

Examiner Interview Summary

Applicants first wish to express their sincere appreciation for the time that Examiner Kubelik spent with Applicants' Attorney, Cynthia Lee, during a telephone discussion on July 1, 2004 regarding the present application. During that conversation, the Examiner indicated that before further prosecution on the merits of the patent application, both annotated and clean-copy versions of the Abstract should be submitted. Thus, Applicants respectfully requests that the Examiner consider this Amendment to the Request for Continued Examination filed on April 28, 2004.

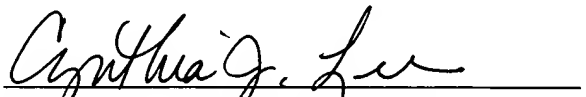
Amendment to Abstract

Both annotated and clean copy versions of the Abstract are submitted herewith on separate sheets. Because there are extensive amendments to the original Abstract as originally-filed with the application, Applicants have presented the original Abstract in strike-through font in the annotated version. Thus, Applicants respectfully request that the entire Abstract as originally-filed be replaced with the clean copy version submitted herewith.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully requests favorable reconsideration and allowance of the present application and all pending claims. If, in the opinion of the Examiner, a telephone conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,



Cynthia J. Lee, Reg. No. 46,033

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, L.L.P.
Suite 1750
100 Galleria Parkway N.W.
Atlanta, Georgia 30339
(770) 933-9500

OIPE
JUL 0 6 2004
PATENT & TRADEMARK OFFICE
K105

ANNOTATED VERSION OF ABSTRACT

Please note that the following clean copy abstract text appeared on page 1 in the specification as filed.

~~Equistatin, belonging to the type I repeated thyroglobulin domain, and known to be an inhibitor of cysteine proteases is found to also inhibit aspartic proteases with a different domain of the protein. The DNA encoding equistatin, an inhibitor of cysteine and aspartic proteases, is isolated from the sea anemone *Actinia equina*. The equistatin protein was found to be particularly active towards gut cysteine and aspartic proteases of a number of common insect pests of agricultural crops, such as Colorado potato beetle, corn rootworm, leafminer fly and thrips. P41 invariant chain fragment, another member of this family with only cysteine protease inhibitor activity was equally active towards the cysteine protease complement as was found for equistatin. Recombinant equistatin protein was found to be larvicidal against Colorado potato beetle and to strongly reduce fecundity of adult thrips. DNA encoding equistatin and other proteins containing similar type I repeated thyroglobulin domains may be cloned into vectors and used to transform plants thus conferring reduced susceptibility to damage by plant pests that have thiol and/or aspartic proteases as digestive enzymes including insects and nematodes and particularly Coleopteran, Dipteran and Thysanopteran insects~~.